

REMARKS

Reconsideration of the pending application is respectfully requested. Claims 30-49 remain pending in the present application.

Claim Objections

Claims 41-44 are objected too as being a substantial duplicate thereof. Examiner alleges that the claims do not structurally distinguish between first and fourth cross-sectional quadrants and that an application of force is a process limitation which does not structurally define the apparatus.

The first and fourth cross-sectional quadrants are defined in the specification of the instant application as follows:

To accomplish the transfer of layered fiber portions from one spaced, perforated rotating collector 11 to the next adjacent collector 11, longitudinally extending idler rolls 13 are positioned between collectors 11. These idler rolls 13 are positioned relative the three spaced rotating collector 9, in accordance with one feature of the present invention, so that the layered mat portion formed on the peripheral surface of a preceding rotatable collector 11 *passes from its first cross-sectional quadrant* in its rotational direction in oriented fashion along spaced idler rolls 13 to an adjacent rotatable spaced collector 11 so as to be *fed to such adjacent rotatable collector 11 along the fourth cross-sectional quadrant--that is advantageously between approximately ninety (90.degree.) degrees of a preceding cross-sectional quadrant to an approximately two hundred seventy (270.degree.) degrees of an adjacent, following collector cross-sectional quadrant.* Para. 29.

In addition to the above excerpt defining the quadrants and the figures showing the quadrants, the claims have been amended to include a degree range of each quadrant further structurally distinguishing between first and fourth cross-sectional quadrants in

claims 41-44. Additionally, the claim language directed toward the application of a force in each of claims 41-44 has been removed. Hence, Applicant's Attorney respectfully requests these objections be withdrawn.

Claims 37 and 38 are objected to for grammatical informalities. Claims 37 and 38 are currently amended correcting said grammatical informalities, hence, Applicant's Attorney respectfully requests these objections be withdrawn.

Drawings Objections

The drawings are objected to for allegedly not showing a) "one layered mat diverting apparatus positioned externally of one of said die sources to apply an external vortically creating force" (Claim 31); b) "at least one small collector diverter positioned in spaced relationship to one of said die source to apply an external vortically creating force" (Claim 32); and c) "perforated collector surface" (Claim 34).

An embodiment of a) "one layered mat diverting apparatus positioned externally of one of said die sources to apply an external vortically creating force" and b) "at least one small collector diverter positioned in spaced relationship to one of said die source to apply an external vortically creating force"; are shown as drum 16 in FIG. 2 and several alternative embodiments are referenced in the instant application as being disclosed and shown in the FIGs. of US 6,596,205. Additionally, the specification references these figures and describes the diverting apparatus as follows:

FIG. 2 is a schematic side view similar to that of FIG. 1, further disclosing a novel collector-like vortically creating force deflector; Para. 18.

In a manner similar to that of co-pending application Serial No. 09/635,310, filed on August 9, 2000, now U.S. Patent No. 6,596,205, issued on July 22, 2003, a direction and external vortically creating force in the form of counter-clockwise rotational, *cylindrical drum 16, which is of smaller surface* than the clockwise rotational cylindrical collector 11 having perforated surface 25. The *drum 16 is gap-spaced* a preselected distance from collector 11 so as to *exert an external vortically creating force* on a preselected portion of the multiple fiber sheet before that portion is reformed on collector 11 to join the remaining portions of the multiple fiber sheet. This action of counter-rotational diverter drum 16 serves to curl the fibers when returned to the rotatable collector 11. It is to be understood that the diverting arrangement as shown, as well as such other diverting arrangements disclosed in the aforementioned co-pending application, can be employed with the collectors as shown and with other collectors which might be added to the overall mat forming structures. Para. 34.

The c) “perforated collector surface” is shown in new FIG. 1A and in amended FIGs. 1, 2, 5, 7, 9, and 11. The specification describes the collector surfaces as being perforated as follows:

Each of these three structures includes a first melt blow die source 7 which includes spaced die orifices 8, each capable of feeding one of three fiber feed paths of attenuated multiple filter fiber layer portions to one of three longitudinally extending, cylindrical rotatable collectors 11, *each of which collectors has a peripheral, perforated collector surface* selectively spaced from and aligned with the first melt blown die source 7 including spaced die orifices 8. Para. 28, lns. 3-11.

New Fig. 1A and revised Figs. 1, 2, 5, 7, 9 and 11 are currently submitted for inclusion in the instant application showing a perforated collector surface. Since the perforated collector surface is now more clearly shown, please withdraw said rejection.

35 U.S.C. § 112 Rejections

Claims 30, 32, 37, 42 and 43 are rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claims 30, 32, 37, 42 and 43 are currently amended resolving

said rejections, therefore Applicant's Attorney respectfully requests that said rejections be withdrawn.

35 U.S.C. § 102 Rejections

Claims 30, 33 and 41-46 are rejected under 35 U.S.C. §102(b) as being anticipated by Barboza et al. (U.S. Patent 5,681,469). Regarding Claim 30, Barboza et al. fails to disclose a second rotating collector surface being spaced from a first rotating collector surface as well as a transfer and orientation means positioned between the first and second collector surfaces to orient and transfer a first layered mat portion from the first rotating collector surface the second rotating collector surface as currently claimed in Claim 30. Barboza et al. discloses a first collector being adjacent a second collector where both collectors directly transfer material to a mat portion being formed there between. There is no space between the collectors in Barboze et al. nor is there a transfer and orientation means positioned between the first and second collectors. Therefore, Barboze et al. fails to disclose each and every claim limitation of Claim 30, hence, Applicant's Attorney respectfully requests this rejection be withdrawn.

Regarding Claim 33, Applicant is currently claiming at least two longitudinally extending cylindrical rotatable collectors and at least one longitudinally extending idler roller, wherein at least one of said at least one longitudinally extending idler roller is positioned between each of said at least two longitudinally extending cylindrical rotatable collectors. Barboze et al. discloses a frustoconical collector adjacent a cylindrical collector without an idler roller there between. Therefore, Barboze et al. fails to disclose each and every claim limitation of Claim 33, hence, Applicant's Attorney respectfully requests this rejection be withdrawn. Additionally,

Claims 41-45 depend from Claim 33 and have the claim limitations of Claim 33 through claim dependency, therefore Applicant's Attorney requests these rejections be withdrawn as well.

Regarding Claim 46, Applicant is claiming a first and second cylindrical rotatable collector having cylindrical axes substantially horizontally aligned and having a space there between and at least one cylindrical rotatable idler roller having a cylindrical axis substantially horizontally aligned below said cylindrical axes of said first and second cylindrical rotatable collectors and having a cylindrical surface between cylindrical surfaces of said first and second cylindrical rotatable collectors. Again, Barboze et al. discloses a frustoconical collector adjacent a cylindrical collector without an idler roller there between. Therefore, Applicant's Attorney requests this rejection be withdrawn.

Claims 30-33, 37-38 and 41-46 are rejected under 35 U.S.C. §102(b) as being anticipated by Frickert et al. (U.S. Patent 2,875,503). Frickert et al. discloses:

The strands 20 and 21 are drawn through a guide eye 25 along with strands 20' and 21' of the second half of the forming stage. All four strands produced in each stage are pulled by a single pair of mated pulling wheels 22 (see Figures 4 to 6).

Frickert et al. fails to disclose rotatable collectors as currently claimed in Claims 30-33, 37-38 and 41-46 but instead discloses pulling fibers through a guide eye with pulling wheels. Since each and every claim limitation is not disclosed in Frickert et al., Applicant's Attorney respectfully requests this rejection be withdrawn.

Claims 30-33, 37-38 and 41-46 are rejected under 35 U.S.C. §102(b) as being anticipated by Loubinoux et al. (U.S. Patent 5,425,796). Specifically, Examiner alleges that FIG. 1, item 9 in Loubinoux et al. is a collecting surface. Loubinoux et al. discloses:

The filaments 5 then pass over a roller 9 which first allows them to be gathered together in the form of a sheet 10 and secondly redirects their path. Loubinoux et al., col. 4, ln. 58 – 61.

As seen in FIG. 1 and described in the above excerpt, Loubinoux et al. fails to disclose a collecting surface as currently claimed but instead discloses rollers for redirecting fibers. Therefore, Applicant's Attorney respectfully requests this rejection be withdrawn.

Claims 30, 33-36 and 41-48 are rejected under 35 U.S.C. §102(b) as being anticipated by Nishino et al. (U.S. Patent 5,628,844). Nishino et al. teaches:

Referring to FIG. 3, a process of manufacturing the topsheet 2 is schematically illustrated. The process comprises a first molding step 28 utilizing a molding drum 30 and first and second melt-blow extruders 31, 32 provided around the molding drum 30 and a second molding step 29 utilizing an endless belt 33 and a third melt-blow extruder 34 provided above the endless belt 32. It should be understood that, when it is desired to form the first sheet 7 as the single-layered sheet, any one of the first and second melt-blow extruders 31, 32 may be suspended. Nishino et al., col. 6, lns. 25-34.

As can be seen in the excerpt, Nishino et al. fails to teach collecting surfaces as currently claimed. Additionally, Nishino et al. fails to teach a transfer and orientation means as Examiner alleges in FIG. 3, item 37. Item 37 is an opening, as defined in Nishino et al., col. 7, ln. 4. Since Nishino et al. fails to disclose the current invention as claimed, Applicant's Attorney respectfully requests this rejection be withdrawn.

35 U.S.C. § 103 Rejections

Claims 39, 40 and 49 are rejected under 35 U.S.C. §103(a) as being unpatentable over any of Barboza et al. (U.S. Patent 5,681,469), Frickert et al. (U.S. Patent 2,875,503), Loubinoux et al. (U.S. Patent 5,425,796) or Nishino et al. (U.S. Patent 5,628,844). As previously shown,

each of these references fails to disclose the currently claimed invention. Additionally, none of these references, alone, or in combination, teach or suggest the currently claimed invention. Hence, Applicant's Attorney respectfully requests this rejection be withdrawn.

Conclusion

Applicant's Attorney asserts that the instant application is in condition for allowance. Applicant's Attorney therefore respectfully requests that the Examiner allow the pending claims. However, if the Examiner believes there are other unresolved issues in this case, Applicant's Attorney of record would appreciate a call at (502) 584-1135.

Respectfully submitted,

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Attachments